



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/500,699

07/02/2004

Sandrine Rochat

RN02002

6703

RHODIA INC
CN 7500
8 CEDAR BROOK DRIVE
CRANBURY, NJ 08512

7590

06/03/2008

EXAMINER

CHUI, MEI PING

ART UNIT

PAPER NUMBER

1616

MAIL DATE

DELIVERY MODE

06/03/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/500,699	Applicant(s) ROCHAT ET AL.	
	Examiner MEI-PING CHUI	Art Unit 1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05/08/2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 22-45 is/are pending in the application.
- 4a) Of the above claim(s) 36-45 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 23-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>05/08/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Status of Action***

Applicant's response to the restriction requirement in the reply filed on 05/08/2008 is acknowledged. Applicant's election with traverse of Group II, which encompasses claims 23-35 in the reply, is acknowledged. The traversal is on the ground(s) that the international phase of this application, claims relating to the various compositions and the use apparently were found to relate to a single invention as all of the claims were searched. This is indeed consistent with applicants' view of the technical feature linking all the claims. It is not understood how claims relating to the present invention can be considered to relate to a single invention in the international phase and yet, under the very same PCT rules, be found to not do so here. Indeed, such action appears to be inappropriate (see Remarks: page 3).

This is not found persuasive because the inventions Group I through V do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the technical feature linking Group I through V is a single agent zinc sulfide.

Jacobson et al. (U. S. Patent No.5,180,585) teach an anti-microbial composition comprising an inorganic particle, i.e. zinc sulfide (ZnS) and a method of employing the

Art Unit: 1616

composition in shaped polymeric articles, polymeric matrix composite or fibers (column 3, line 34-39, 45-48, 61-62 and 67-68).

Since the technical feature linking each instant invention is known, it does not constitute a special technical feature as defined by PCT Rule 13.2 as it does not define a contribution over prior art.

Applicants next argue that the method of non-elected Group I is associated with the composition of elected Group II that it is entirely appropriate to examine Group I together with elected Group II herein.

The examiner has required restriction between product and method claims. Where applicant elects claims directed to the product, and the product claims are subsequently found allowable, withdrawn process claims that depend from or otherwise require all the limitations of the allowable product claim will be considered for rejoinder. All claims directed to a nonelected process invention must require all the limitations of an allowable product claim for that process invention to be rejoined.

The requirement is still deemed proper and is therefore made FINAL.

Status of Claims

Accordingly, claims 1-21 are cancelled, claims 23-35 are presented for examination on the merits for patentability as they read upon the elected subject matter and claims 22, 36-45 directed to non-elected inventions are withdrawn.

Art Unit: 1616

Comment: in claim 35, the proper Markush language is --- selected from the group consisting of ---. Please correct.

Claim Rejection - 35 U.S.C. § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102(b) that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 23-27 and 32-35 are rejected under 35 U.S.C. 102(b) as being anticipated by Kane, J. P. (WO 99/67451).

The instant claims are drawn to a composition comprising (i) zinc sulfide, which present in an amount less than or equal to 5 % by weight, and (ii) thermoplastic polymeric matrix, wherein the thermoplastic matrix is polyamide, i.e. polyamide 6, polyamide 6.6, polyamide 4.6, polyamide 6.10, polyamide 6.12; polyolefins, i.e. polyethylene or polypropylene; or polyesters.

With respect to claims 23, Kane, J. P. discloses a thermoplastic polymer tow comprising zinc sulfide (ZnS) delusterant (page 1, lines 5-7). Kane, J. P. also discloses that delusterant, i.e. zinc sulfide, is well known in the art as an additive that opacifies polymer to produce a fiber having a more matte appearance with suppressed glitter

Art Unit: 1616

because ZnS is a more lubricious and softer material compared to other delusterants (page 2, lines 1-3 and 17-20). Therefore, instant claim 23 is anticipated.

With respect to claim 24, Kane, J. P. also discloses that zinc sulfide is present in the thermoplastic polymer tow in an amount about 0.02 % to about 5 % by weight (page 4, lines 27-31 and page 7, lines 21-25). Therefore, instant claim 24 is anticipated.

With respect to claims 32-35, Kane, J. P. further discloses that the suitable thermoplastic polymer material is polyamide, polyester or polypropylene, and most preferably is polyamide, i.e. nylon 6,6; nylon 6; nylon 4,6; nylon 6,10 or nylon 6,12 (page 6, lines 6-10). Therefore, instant claim 32-35 are anticipated.

With respect to claims 25 and 27, Kane, J. P. discloses zinc sulfide is used in the fiber production process (from 0.02 % to 5 %) to form flock fiber and the products formed therefrom (page 1, lines 4-5 and page 4, lines 23), which implicates zinc sulfide is added as a particles in the composition (also see page 9: Example 2, lines 33-38). Therefore, instant claims 25 and 27 are anticipated.

With respect to claim 26, Applicants claim the composition is for cleaning or treating textile surfaces, wherein the surfaces are carpets or fitted carpets. The reference of Kane, J. P. does not disclose that composition comprising zinc sulfide is used in the manner as instantly claimed in claim 26; however, the intended use of the claimed composition does not patentably distinguish the composition, per se, since such undisclosed use is inherent in the reference composition. In order to be limiting, the intended use must create a structural difference between the claimed composition and the prior art composition. In the instant case, the intended use does not create a structural difference, thus the intended use is not limiting.

Art Unit: 1616

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kane, J. P. (WO 99/67451) in view of Amirzadeh et al. (U. S. Patent No. 6,436,183).

Applicant Claims

Applicants claim a composition comprising zinc sulfide, wherein the composition is in liquid form and comprises 10 % to 98 % of water.

Determination of the scope and content of the prior art (MPEP 2141.01)

Art Unit: 1616

The teaching of Kane, J. P. has been set forth above. Essentially, Kane, J. P. teaches a thermoplastic polymer tow comprising zinc sulfide (page 1, lines 5-7), which is present in an amount of 0.02 % to 5 % by weight of the composition.

Ascertainment of the difference between the prior art and the claims
(MPEP 2141.02)

(1) Kane, J. P. does not explicitly teach the composition is in the form of a liquid. However, the deficiency is cured by the teaching of Amirzadeh et al.

Amirzadeh et al. teach a composition comprising zinc sulfide for use in making shaped parts made of synthetic organic polymers, i.e. thermoplastic materials, and coating applications (column 1, lines 5-10 and column 2, lines 25-26).

Amirzadeh et al. also teaches that the advantage of using zinc sulfide with synthetic thermoplastic material for making shape parts is because zinc sulfide has a high transparency in the visible light region and fireproofing properties (column 2, lines 35-40). In addition, Kane, J. P. teaches that the thermal stability of many thermoplastic materials can be influenced favorably by zinc sulfide (column 1, lines 29-31).

Amirzadeh et al. further teaches that the composition can be a coating composition which has incorporated a volume content of 0.5 % to 55 % of the zinc sulfide based on the total weight of the coating composition, wherein the zinc sulfide is produced by a process comprising contacting a sulfide compound with an aqueous solution containing zinc compound to precipitate zinc sulfide (column 5, claims 20 and 21).

Art Unit: 1616

(2) Kane, J. P. also do not explicitly teach the composition comprises 10 % to 98 % of water.

Finding of prima facie obviousness Rational and Motivation (MPEP 2142-2143)

It would have been obvious to a person of ordinary skilled in the art at the time the invention was made to utilize the teachings of Kane, J. P. and Amirzadeh et al. to arrive at the instantly claimed invention.

One would have been motivated to add zinc sulfide into a composition comprising thermoplastic material in order to improve the stability and light transmission property of the thermoplastic material, as taught by Amirzadeh et al. One also would have been motivated to modify the use of zinc sulfide in a solid composition for an aqueous composition dependent on desired intended use of the composition. Therefore, a skilled in the artisan would have a reasonable expectation of success because the choice of using zinc sulfide in an aqueous composition or in a solid composition is within the knowledge generally available to one ordinary skill in the art to modify the teachings.

From the teachings of the references, it is obvious that one of ordinary skill in the art would have had a reasonable expectation of success to arrive at the instant claimed invention. Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

Art Unit: 1616

Claim 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kane, J. P. (WO 99/67451) in view of Ghahary, A. (U. S. Patent No. 5,304,592).

Applicant Claims

Applicants claim a liquid composition comprising zinc sulfide, wherein the composition further comprises at least one filler, i.e. sodium borate decahydrate, which present in an amount of 40 % to 98 % by weight of the composition.

Determination of the scope and content of the prior art (MPEP 2141.01)

The teaching of Kane, J. P. has been set forth above. Essentially, Kane, J. P. teaches a thermoplastic polymer tow comprising zinc sulfide (page 1, lines 5-7), which is present in an amount of 0.02 % to 5 % by weight of the composition.

***Ascertainment of the difference between the prior art and the claims
(MPEP 2141.02)***

Kane, J. P. does not teach the zinc sulfide-containing composition comprising a filler. However, this deficiency is cured by the teaching of Ghahary, A.

Ghahary, A. teaches an article which comprises a plastic material suspended within a liquid thermoplastic matrix, and additionally with a filler as an additive (column 2, lines 32-44 and 51-55, and column 5, line 23).

Art Unit: 1616

Ghahary, A. also teaches that the filler is used with the matrix in the form of particulates, wherein the filler, i.e. borax, can be used in an amount of 1 % to 50 % by weight (column 5, lines 21-23 and 32). Ghahary, A. further teaches that the specific gravity of the plastic material in the composition is adjusted by the addition of fillers, i.e. borax (column 6, claims 2 and 3).

It is noted that sodium borate decahydrate is also commonly known as borax.

Finding of prima facie obviousness Rational and Motivation (MPEP 2142-2143)

It would have been obvious to a person of ordinary skilled in the art at the time the invention was made to utilize the teachings of Kane, J. P. and Ghahary, A. to arrive at the instantly claimed invention.

One would have been motivated to add an additional component, i.e. a filler, into a composition comprising zinc sulfide and polymeric matrix material, with a reasonable expectation of success, because the addition of a filler to a matrix material would help to improve the property of the polymeric composition, as taught by Ghahary, A.

From the teachings of the references, it is obvious that one of ordinary skill in the art would have had a reasonable expectation of success to arrive at the instant claimed invention. Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

Art Unit: 1616

Conclusion

No claims are allowed.

Contact Information

Any inquiry concerning this communication from the Examiner should direct to Helen Mei-Ping Chui whose telephone number is 571-272-9078. The examiner can normally be reached on Monday-Thursday (7:30 am – 5:00 pm). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where the application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either PRIVATE PAIR or PUBLIC PAIR. Status information for unpublished applications is available through PRIVATE PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the PRIVATE PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Johann R. Richter/

Supervisory Patent Examiner, Art Unit 1616

Art Unit: 1616